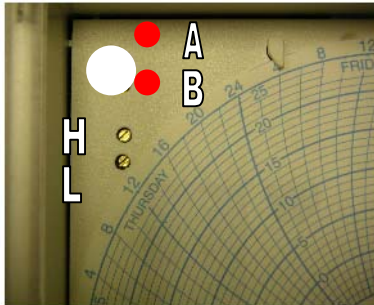


### **Battery powered**

The battery is pre fitted and should not be removed. The battery is designed to power the unit for up to 5 years. The battery should be replaced by a 3V Lithium battery (positive is indicated on the label covering the battery department. To check the battery press and hold the button located on the bottom left of the unit, the chart should rotate one full revolution.

### **Setting the alarm**

It is suggested that the user places an old chart, so as not to produce a trace on a new chart, when setting the alarm. To set the alarms press and hold button A the pen will move to the high alarm setting. To adjust this, turn the potentiometer marked H, whilst still hold the button marked A. Turning the potentiometer clockwise will increase the alarm set point, counter-clockwise will decrease the set point. To set the low alarm use the same method but hold the button marked B and use the potentiometer marked L.



**Calibration** The Mini-chart recorder is pre-calibrated and should require no adjustment. Contact Abacus Instruments should you have doubts to the accuracy of the temperature recording.

**Breakdown** Do not tamper with the Pen Adjust Screws, as they are factory set, or the warranty will be voided. In the event of incorrect operation contact the manufacturer or the supplier for advice.

**Dismantling will invalidate the warranty.**

[Abacus instruments Limited, 13Cold Bridge Way, Shefford, Beds, SG17 5HQ](http://www.abacusinstruments.com)  
Tel: 01462 638200, Fax: 01462 638201, [www.abacusinstruments.com](http://www.abacusinstruments.com)

### **Mini-chart T.AL Instructions**



**Wall Mounting** For wall mounting remove the chart and use the top and bottom holes on the rear of the instrument to fix to the wall with two suitably sized screws. See diagram



### **Panel mounted**

The panel-mounted units have two integral clips, which enable them to be easily mounted into a DIN size cutout directly from the front. Insert the instrument into the cutout and turn the door lock counter-clockwise by 90°C to open the door. Once the chart is removed the two large screw heads in the centre of the top and bottom edges should be gently tightened clockwise with a screwdriver to rotate and draw the two securing lugs up towards the back of the panel. The Mini-chart is now mounted securely. See diagram.



### Connections

The Mini-chart should be connected via the 3-core flex to a 240Vac power source. When connected and switched using the toggle switch located in the bottom left corner of the front panel a red LED in the bottom left hand corner will be lit. If the LED fails to light then check the supply, if this proves to be in working order then proceed to check the re-chargeable battery is located securely in the battery holder. **(It is important not to remove the rechargeable battery located under the chart, as the chart will cease to rotate.)**



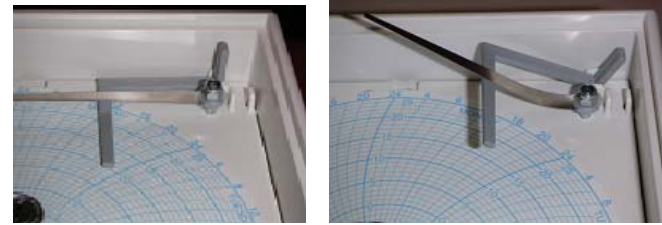
The sensor (PT100/PT1000) should be connected via the right hand terminal block as indicated. The volt free contacts can be connected via the left hand connector block.

### Door opening

A single lock located at the bottom right hand corner closes the door. The security key has a raised tab and this should be aligned with the slot in the lock in order to open the door. The key can then be turned 90° counter-clockwise

### Changing the pen

Wait until the unit is within its calibrated operating temperature range. Remove the pen from its packaging (remove & retain the tip seal) and using the pen arm lifter raise the pen arm gently holding the pen arm, slide the pen on to the end taking care that the tip points toward the chart. Once the pen is located relocate the pen using the pen arm lifter. Undue force should be avoided as the pen arm is sprung to ensure optimum contact pressure with the chart. If at any time the pen arm is bent so that insufficient force is being applied to make a trace on the paper then the nib should be removed and light pressure exerted on the arm as near as possible to the spindle until the tip at the other end of the pen arm is resting about 5mm from the paper. The pen nib can then be attached once again.



### Changing the Chart

In order to change the chart open the door using the security key provided with the instrument. The chart is removed by pushing the retaining bar on the centre hub (diagram 1a) to the open position (diagram 1b). The retaining bar is then rotated to the upright position (diagram 1c), so that the chart can be removed over the top of the centre hub. Place the new chart over the top of the chart retainer and rotate the lever back down so it is flat over the chart. Push the retaining bar back to the locked position (diagram 1a)

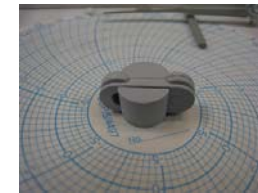


Diagram 1a

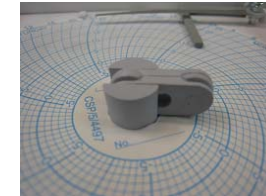
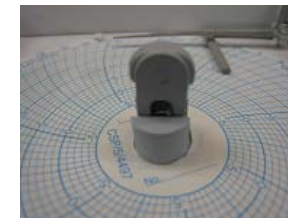


Diagram 1b



### Aligning the chart with the pen

Press and hold the button located on the bottom left of the instrument until the chart rotates to the correct position.

